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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,960	03/14/2001	Koki Kanda	2803.65313	3697

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EXAMINER

BLOUIN, MARK S

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 08/14/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,960

Applicant(s)

KANDA, KOKI

Examiner

Mark Blouin

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

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Detailed Action

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koishi (USPub 0075601 A1) in view of Boutaghou et al. (USPN 6,377,422).
3. Regarding Claims 1 and 13, Kioshi shows (Fig. 1) a magnetic disk drive unit comprising in a box body a spindle motor for rotating at least one disk medium and a head slider comprising in turn head for reading data from and writing data to a disk medium, a head slider being mounted via head suspension on a distal end portion of a carriage which is driven by a voice coil motor and able to perform seeking relative to recording tracks formed on a disk medium. Kioshi also shows a head slider (Fig. 2) for use in a disk drive unit wherein flat air bearing portions (Fig. 2, 25a,b) are formed in parallel on both sides of a side of the head slider which flies above a disk medium at an air outflow (26) end thereof in such a manner that said flat air bearing portions are raised higher by a step than a slider main body (14), and wherein a head portion (25a) comprising head elements (35) is provided adjacent to an air outflow (26) end of one of the air bearings, whereas a dummy head portion (25b) is provided adjacent to an air outflow (26) end of the other air bearing portion, top surfaces (38,41) being formed lower by a step than top surfaces of the air bearing portions (36,37), the head slider being characterized in that the top surfaces of the head

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portion (38) and the dummy head portion (41) on air outflow sides thereof are formed lower by a degree. Kioshi does not show protection film on the head elements and top surfaces of the dummy head portion. Boutaghou et al. shows protection film (Fig. 5, 68) on the head elements and other surfaces of the head slider. It is well known in general and especially in the art to use thin film layers to protect surfaces subject to constant friction and heavy wear. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the head slider (Fig. 1) of Kioshi with the thin film layer (Fig. 5, 68) as taught by Boutaghou et al. The rationale is as follows: One of ordinary skill in the art at the time the invention was made would have been motivated to provide the head slider of Kioshi with the thin film layer as taught by Boutaghou et al. to reduce friction and wear of the disc head contact elements.

4. Regarding Claims 2 and 14, Kioshi shows a head slider (Fig. 1), wherein the distance in a longitudinal direction of the head slider of an area where the top surface (38) of the head portion (25a) is formed lower is made equal to the distance in the longitudinal direction of the head slider of an area where the top surface (41) of the dummy head portion (25b) is formed lower.

5. Regarding Claims 3 and 15, Kioshi shows a head slider (Fig. 1), wherein the distance in the longitudinal direction of the head slider of an area where the top surface (41) of the dummy head portion (25b) is formed lower is made longer than the distance in a longitudinal direction of the head slider of an area where the top surface (38) of the head portion (25a) is formed lower.

6. Regarding Claims 4 and 16, Kioshi shows a head slider, wherein the top surface (41) of the dummy head portion (25b) is formed such that a certain area of the top surface is maintained as high as the height of the top surface (41) adjacent to the air bearing portion (37) in the

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longitudinal direction of the head slider, whereas the remaining area (Fig. 7, 71) of the top surface is lowered than a certain area over an area to the vicinity of the air bearing portion (37).

7. Regarding Claims 5,9,and 17, Kioshi shows a head slider, wherein it is obvious that the top surfaces of the head portion and the dummy head portion on air outflow sides thereof can be lowered by partially deleting the protection films. Removal of any material from a surface will inherently lower or reduce that surface.

8. Regarding Claims 6,10, and 18, Kioshi shows a head slider, wherein locations of the top surfaces (38,41) of the head portion (25a) and the dummy head portion (25b) which are formed lower are level with the flying height of a side of a main body of the head slider which flies above the disk medium.

9. Regarding Claims 7, 11, and 19, Kioshi shows a head slider, wherein the locations of the top surfaces (38,41) of the head portion (25a) and the dummy head portion (25b) which are formed lower are positioned higher than the flying height of the side of the main body of said head slider which flies above the disk medium.

10. Regarding Claims 8,12, and 20, Kioshi shows a head slider, wherein a plurality of pads (Fig. 2, 33,48,49) are provided on the side of the main body of the head slider which flies above the disk medium for avoiding the sticking of the head slider to the disk medium when the disk medium is at a stop.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Levi et al. (USPN 6,137,565) is cited to show another variation of an air bearing slider.

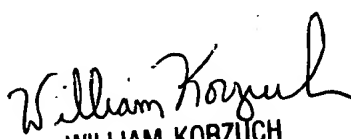
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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Blouin whose telephone number is (703) 305-5629. The examiner can normally be reached M-F, 6:00 am – 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, William Korzuch can be reached at (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314 for regular and After Final communications.

Any inquiry of general nature or relating to the status of application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Mark Blouin
Patent Examiner
Art Unit 2653
August 6, 2002


WILLIAM KORZUCH
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